DOCUMENT RESUME

ED 200 593 SP 017 964

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TITLE Teacher Participation in Educational Innovation: Some Insights Into Its Nature.
INSTITUTION Research for Better Schools, Inc., Philadelphia, Pa.
SPONS AGENCY National Inst. of Education (ED), Washington, D.C.
PUB DATE Feb 81
NOTE 41p.

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS *Educational Innovation; Elementary Secondary Education; Participant Characteristics; Participant Satisfaction; Program Design; *Program Development; Program Implementation; *Teacher Administrator Relationship; Teacher Morale; *Teacher Motivation; *Teacher Participation

ABSTRACT

An intensive study of innovative projects in five elementary and secondary schools provided an opportunity to examine teacher participation in pre-implementation activities. Particular attention was paid to the motivation and roles of participants. It was found that participation is complex and varied. There were three major findings: (1) Voluntary participation and initial motivation were not as important to participant satisfaction as factors which emerged later; (2) Participant roles and activities varied considerably, influencing the attitudes towards innovation and therefore the motivation for participation; and (3) The representativeness of the participant group was more important to successful dissemination than voluntary participation. Important incentives and deterrents were: anticipated educational benefits; the opportunity for increased interaction among teachers and with administrators; compatibility between classroom and project goals; the costs of participation; and the perceived likelihood that innovations would be continued or expanded. (Author/FG)

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TEACHER PARTICIPATION IN EDUCATIONAL INNOVATION: SOME INSIGHTS INTO ITS NATURE

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The preparation of this report was supported by funds from the National Institute of Education, United States Department of Education. The opinions expressed do not necessarily reflect the position or policy of NIE, and no official endorsement should be inferred.

ABSTRACT

Teacher participation is well accepted as important to successful educational innovation. Yet, relatively little is known about participation. An intensive study of innovation projects in five schools provided an opportunity to examine participation in some depth. It was found that participation is complex and varied. Its effects cannot be expected to be constant across innovations or even across time within one innovation. Rather, the form which participation takes in a particular situation must be taken into consideration when the effects of participation are studied. In particular, motivation to participate and the roles of participants were studied here. Major findings were:

- Voluntary participation and initial motivation were not nearly as important to participant satisfaction with and commitment to an innovation as factors which emerged later to either encourage or discourage continued participation.
- The roles and activities of participants varied considerably; their attitudes toward the innovations varied accordingly and influenced their motivation to continue participating.
- The representativeness of participant groups was more important to successful dissemination to other teachers than was voluntary participation.

This study necessarily focused on participation in pre-implementation activities, primarily planning and development. Implementation began shortly before the research reported here ended. It is hoped that the effects of participation on implementation can be studied in the future.

PREFACE

Research for Better Schools (RBS) is committed to providing a balanced program of research, development, and technical assistance to educational agencies in the Pennsylvania, New Jersey, and Delaware region. A major part of the research element consists of Field Studies projects. One of those projects focuses on two of RBS' development efforts and the local schools participating in them. The development projects are creating approaches through which external agencies can help schools improve their curricula and instructional strategies in basic skills and career preparation. Schools participating in the development hope to improve their own educational programs. RBS intends to develop approaches and knowledge which will have generalizable utility.

This is one of several reports on the Field Studies' research. The five reports being developed in the 1980-81 year are intended to be of interest to researchers, school practitioners, and those charged with the operation and staffing of development and dissemination projects throughout the country. The reports cover two years of activity in five schools. Their purpose is to identify and clarify issues related to the support of local school improvement. A complete listing of all reports available from this project is found on the inside back cover of this document.

William A. Firestone
Field Studies Coordinator

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TEACHER PARTICIPATION IN EDUCATIONAL INNOVATION: SOME INSIGHTS INTO ITS NATURE

There are many arguments for teacher participation in the planning and implementation of educational innovation and few arguments against participation. Yet, the findings of research on the effectiveness of teacher participation are inconclusive, and little is known about the nature of participation itself. The research reported here indicates that participation is a very complex phenomenon. The nature of participation, particularly the roles and activities of participants, varies considerably within and between innovation projects. The motivations and attitudes of participants toward the innovations vary accordingly. Consequently, there are numerous "contingencies" (Miles, 1980) of participation, or conditions under which it is more or less important to teachers or effective for implementation.

One major rationale for participation is that it is believed to contribute substantially to the development of ownership and commitment (Berman and McLaughlin, 1977; Firestone and Corbett, 1979; Havelock, 1973), thereby increasing teachers' motivation and willingness to spend the time and effort required by an innovation and to persist despite the difficulties encountered. Another, related, rationale is that participation may reduce initial staff resistence to change (Gross, 1979) by giving administrators (or others) an opportunity to convince teachers of the innovation's worthiness or by equalizing power between teachers and administrators (Gamson, 1968). Still another reason for advocating

participation is that it can be used to help teachers develop a rather thorough understanding of an innovation, thereby avoiding problems which have been encountered by teachers who have only a vague understanding of the nature of an innovation or lack the skills to implement it (Gross, Giacquinta, and Bernstein, 1971; McLaughlin and Marsh, 1978). A final rationale for teacher participation, particularly in the development of an innovation, is that teacher involvement should help ensure that the innovation will be appropriate and feasible in the situation for which it is intended (Berman and McLaughlin, 1977).

Two serious potential disadvantages of teacher participation have been described. Participation can be very time consuming (Berman and McLaughlin, 1977). Moreover, it can create confusion and disillusionment, particularly when others initiate the innovation and leave it to participants to develop workable plans but give them little guidance (Charters and Pellegrin, 1972).

Several reviewers of research on the effectiveness of teacher participation have indicated that research findings are inconclusive (Fullan and Pomphret, 1977; Giacquinta, 1973; Miles, 1980). One explanation for the inconclusiveness might be the diversity of the research itself. The research included different kinds of participation (e.g., teachers as trainees or program developers), in different kinds of innovations (e.g., major structural changes, new teaching techniques), and at different stages of the innovation process. Furthermore, the research examined different potential effects of participation--for example, teacher satisfaction, teacher commitment, and extent of implementation. The complexity

and contingencies of participation were not taken into consideration. This diversity suggests that the concept of teacher participation is not unidimensional and that research which illuminates this complexity is warranted.

An on-going intensive research study of educational change projects in five schools provided an opportunity to study teacher participation in some depth. Some of the complexities of participation were evident in those projects and will be described here. The two major aspects of participation which were especially illuminated were motivation to participate and the roles of participants. The two were related; the roles of participants influenced their motivation to continue participating.

Teacher motivation is generally considered quite important to successful implementation of educational innovations. While decisions to implement innovations are often made administratively or collectively, actual implementation is the responsibility of individual teachers and is at least partially dependent on teacher motivation. Consequently, it is believed that participation should be voluntary or include only teachers who are receptive to an innovation and motivated to commit extra time and effort to it. Those beliefs were not supported here. Voluntary participation and initial motivation were generally not important in the five sites. However, numerous factors emerged which were important to motivation to continue participating. Those factors will be described.

The roles of participants are not recognized in the literature on innovation as variable or as having an important influence on teacher

motivation. However, the roles of participants varied considerably in the projects studies here. Participants reacted differently to the different roles. Their attitudes toward continued participation in the projects varied accordingly. Some roles increased motivation to participate; other roles threatened continued participation.

The remainder of this paper will be divided into three sections: (1) participant selection and initial motivation, (2) incentives and deterrents to continued participation, and (3) participant roles. "Motivation to participate" will refer primarily to participation in pre-implementation meetings and other activities which occurred during the time period covered by this paper.

Research Methods and Setting

The data reported here are from an intensive one and one-half year study of educational change projects in five schools. The study was conducted by researchers from a regional educational laboratory, Research for Better Schools (RBS). The five schools participated in basic skills or career education projects developed collaboratively by the schools and RBS organizational units which were separate from the research unit. At each school, a participant group which included teachers, administrators, and sometimes others (counselors, specialists, community members, students)* worked with a field agent from RBS.

The research approach was iterative and hypothesis-generating; research questions became increasingly focused as time progressed. Field

*As implied earlier, this paper is primarily concerned with teacher participants. However, some of this discussion will be applicable to other participants as well.

research methods were used. Each member of the research team was responsible for one or two sites and spent approximately one day a week at each site. The researchers attended project meetings, interviewed participants and other school staff, attended various meetings and other functions at the schools, and interacted informally with participants, field agents, and others.

For the most part, data collection was relatively unstructured. However, two or three focused interviews were conducted with each participant. Also, a questionnaire was administered, demographic data were collected, and some documents were examined, although those data sources were used minimally in the findings reported here. Field notes were recorded after each site visit; a computerized indexing system made the notes readily accessible to all members of the research team.

Data analysis was continuous. The researchers' observations and interpretations were discussed throughout the period of research, both informally and through meetings scheduled to discuss theoretical and methodological issues. Data were sometimes also discussed with field agents and school administrators. The researchers read each other's field notes. Initial drafts of papers were submitted to other members of the research team for reactions; revised versions were submitted to RBS field agents and other employees. Final versions were then written.

The Innovations

The intent of the basic skills innovation was to help teachers use the results of educational research. Participants gathered classroom

data, compared them to research data on the relationships between classroom variables and achievement test scores, and subsequently identified and implemented changes which were intended to raise achievement test scores by manipulating classroom variables. RBS employees developed extensive training materials and spent considerable time training teachers in the use of the procedures. During the first one and one-half years of the innovation (the time covered by the research reported here), two sets of classroom variables were examined--student engaged time and two content variables, prior learning and instructional overlap. Student engaged time is defined as the amount of time students actually spend working on the basic skills. Prior learning refers to the relationship between what students have mastered and what is needed to help them learn new content; instructional overlap is the overlap between content actually taught and content included on criterion measures such as standardized or locally-developed achievement tests. The materials and procedures used in the projects studied here were in a developmental phase and were revised on the basis of experience during the course of the projects. RBS basic skills employees expected to reduce the complexity of the materials before using them in subsequent sites.

The career education innovation was not as highly structured. Participant committees worked with RBS field agents to develop programs which were designed to meet the needs and preferences of individual schools and communities. The committees used a process through which each adopted a career education philosophy and goals, surveyed faculty

and students to assess their preferences regarding career education goals and impressions of the extent to which the goals were already being addressed, surveyed community members to assess their goals preferences, and developed plans for implementation. Teachers on the committees selected or wrote classroom activities and then used them during a nine-week field trial of implementation. They planned to subsequently implement career education more widely.*

The Schools

The five schools which participated included three elementary schools and two secondary schools. The three elementary schools, which have been given the pseudonyms Middleville, Patriot, and Smalltown, took part in the basic skills project. The two secondary schools, Green Hills and Neighbortown (also pseudonyms), participated in the career education project. Middleville is a medium size (800 students) K-6 school in a lower middle-class suburb. Twenty percent of the students are black or Hispanic; many students and community members maintain identities with other ethnic groups. Patriot is a small K-4 school (less than 400 students) in a small city. Approximately 95 percent of the students are black or Hispanic. The school is located in an old two-story red brick building. Smalltown is a 1-5 school in a rural area. About one-third of the approximately 250 students are from ethnic minority groups. Green Hills is a junior high school (grades 8 and 9) with approximately 700 students; seven percent are black or Hispanic. It is located in an upper

*More information about the basic skills innovation is available in Graeber (1980) and Helms (1980); more information about the career education innovation is available in Career Preparation Component (1979).

middle-class neighborhood. Neighbortown is a four-year high school in a rural area. None of the nearly 800 students are black or Hispanic. Both Green Hills and Neighbortown are located in attractive, spacious, relatively new buildings.

Participant Selection and Initial Motivation

Educators hold several beliefs about conditions which are important to effective teacher participation in planned educational change. There are two lines of thinking about how selection can affect participation and teacher interest in an innovation. The first links participation to motivation. The argument is that teachers should be receptive to change and willing to devote time and effort to it. Even though one of the purposes of participation may be to develop further motivation, participation itself may be ineffective if teachers are not already receptive to an innovation and willing to give it time and effort. To help ensure that a participant group is motivated, participation should be voluntary. If it is necessary to appoint some participants, appointment should be limited to teachers whose prior interests or experiences indicate that they will be motivated to participate. The second line of thinking has to do with selection and representation. The starting assumption is that any school is divided into various departments, grade levels, and informal groups that may have different perspectives on how a change project should be designed and implemented. To build downstream support for a project and ensure that a variety of concerns are surfaced, it is important that all of these groups are represented. Sometimes it is possible to recruit teachers voluntarily and ensure that all internal

groups are represented. However, when some groups do not seem initially interested in a change project, administrators must decide whether voluntary selection or representativeness is more important. Participant selection and initial motivation will be described in the following paragraphs.

Sometimes participation is completely voluntary, such as when a program is announced but absolutely no pressure is placed on teachers to volunteer, or completely coerced, such as when teachers are told to participate without being given an option to decline. Frequently, however, the methods used to solicit participants fall somewhere in between the two extremes and are difficult to classify. For example, a principal who appoints teachers to a project may claim that they were free to decline the appointment but may also tell teachers that one criterion used for teacher evaluation will be their participation in special projects. In the projects studied here, participation was clearly voluntary at only one school, Patriot. At Smalltown, administrators strongly urged teachers to participate; some teachers did not feel compelled to participate but others did. At the other three schools, the principals notified participants of their appointment to innovation committees*; some participants felt that they could have declined the appointment but other did not. One teacher said that all teachers in the school were expected to participate in a special project; that teacher felt obligated to participate either in the career education project or another one. A teacher

*There were two exceptions. A Middleville teacher asked to be placed on the committee. A Green Hills teacher who had considerable interest and course work in career education learned of the project from a colleague and asked to be included also.

in another school reported feeling the he/she did not really have a choice regarding participation. Although the principals at the four schools (all except Patriot) did not consider themselves to have coerced participants, and some teachers did not feel required to participate, many teachers did not feel that participation was a matter of free choice. Therefore, participation will not be considered voluntary in those schools.

As mentioned above, it seemed to be relatively unimportant that most participants did not become involved voluntarily. For the most part, volunteers could not be distinguished from appointees. Many appointees became very committed to the projects; several volunteers became rather disenchanted. Both volunteers and appointees were subject to the same influences. They participated willingly so long as the projects progressed smoothly, but their commitment wavered from time to time. For example, project activities occasionally intensified and required considerable time of participants. Sometimes teachers were not given sufficient advance notice of project activities to prepare lessons for substitute teachers. Implementation of the career education activities occasionally threatened to interfere with coverage of regular subject matter content. At such times participants either openly expressed their dissatisfactions, perhaps by threatening to withdraw from the projects, or gave the projects low priority.

The lack of importance of voluntary status might be explained by several factors. First, some participants were selected because principals thought they would be receptive to the project. For example, at least

three appointees at Green Hills had some history of concern for or involvement in career education. A three-member pre-planning team in a basic skills school included a special reading teacher, a primary grade teacher, and an upper grade teacher who had recently been assigned to teach reading and sought the kinds of assistance the project offered.

A second factor which contributed to the lack of difference between volunteers and appointees was that many appointees became committed to the projects quickly. The face validity of the basic skills innovation was high. The innovation first focused on time-on-task. It seemed almost self-evident to participants that if students spent more time working on the basic skills, their achievement would improve. Two of the three schools in the basic skills innovation served low socioeconomic populations and had low achievement test scores. Similarly, many participants in the career education innovation became convinced of its importance. For example, one participant taught an elective subject with declining enrollment and thought the lure of career opportunities in that field, which students would become aware of through the project, might help boost enrollment.

A third factor which helped explain the relative unimportance of voluntary status was that most teachers did not view appointment negatively. Teachers seemed to view participation as a privilege or as the prerogative of the principal. Although one or two Middleville teachers who had wanted to be included initially were not appointed, they did not say anything to the principal; they thought the principal would have

appointed them if he/she wanted them to participate. Another principal's letter of appointment commended teachers for their excellence; at least one teacher was initially flattered to have been appointed. Some teachers did not seem to expect that participation would be voluntary because that was not customary in their schools. Instead, they cooperated out of a sense of duty. Also important here was the existence of relatively little tension between teachers and principals in most of the schools at which participation was not completely voluntary. If substantial tension had existed, teachers might have been more resistant to appointment.

While it appeared that some participants were selected because of prior experience or interest in the content area of an innovation, many were not. Several participants at Neighbortown and Middleville appeared to have been included partially because they did not have regular teaching assignments (specialist teachers, counselors) or were otherwise uncommitted during the time scheduled for project meetings. A few participants would have been unlikely to decline the appointment because of personal friendship with a principal or untenured status.

It was not apparent that the inclusion of participants without evidence of prior motivation had particularly important consequences for their commitment to or satisfaction with the projects or for project development and implementation. Some of the most committed participants were people without teaching assignments during the time scheduled for meetings.

Although voluntary participation and the selection of participants with prior experience or interest were not important to participant satisfaction or commitment, the representativeness of participant groups was important. Representativeness was related to project acceptance by other teachers and, thus, to the potential success of project dissemination to them. However, the criteria used to evaluate representativeness were complex and varied. Some teachers at one secondary school were skeptical of the project because the initial participant group did not include representatives of all major departments. In addition, some teachers at that school considered the size of the group important; they were skeptical of anything planned by a small group of others. And, some teachers at the school attributed characteristics to the project on the basis of their attitudes toward specific participants. Some participants were reported to be members of a clique headed by the principal, who was in serious disfavor with many teachers; some teachers viewed with cynicism anything which might be at least partially attributed to the clique. Some of the other participants were seen as competent, hard-working teachers who would not devote time to an innovation which was not worthwhile; some teachers were receptive to the project because of the involvement of those participants. On the other hand, the criteria used at the other secondary school were much more simple. That initial participant group also excluded representatives of some major departments. Despite that, and despite the group's small size (two teachers, a counselor, and two administrators), non-participants seemed to be

satisfied with the group because it included liberal and conservative faculty members. The Middleville principal anticipated the importance of group representativeness to dissemination and attempted to appoint a group which was representative of the school. The participant group included teachers from a variety of grade levels, teachers the principal considered strong and teachers he/she considered weak, teachers the principal expected to be receptive to the innovation and teachers he/she expected to resist it. The principal said he/she considered this a more useful trial group for the innovation than a group which would have been expected to react favorably but which would have been dissimilar to teachers to whom the project was later disseminated.

Incentives and Deterrents to Continued Participation

As mentioned earlier, many participants did not have any particular motivation initially; they simply complied with principals' requests to participate. They knew little about the innovations or about what participation would entail. As one teacher said, "I got a notice telling me to attend a meeting." Other participants were attracted by the face validity of the basic skills project or had previously been involved in career education. However, numerous factors which either encouraged or discouraged continuing participation emerged over time. These included commitment to an innovation, increased internal communication, compatibility between project and other goals, costs of participation, perceived future of the innovation, and commitment to specific persons.

Commitment to the Innovation

Many participants became committed to the purpose underlying an innovation; they became convinced that it was important to increase student engaged time or to teach career education. They thought students would benefit from their participation. Some participants eventually developed a sense of having invested so much in the projects that they could not withdraw without feeling that their efforts had been wasted. In fact, some said that they intended to continue doing project activities in their classrooms even if the project in their school were discontinued.

Increased Internal Communication

Teachers felt that, in addition to directly benefiting students, participation benefited themselves and the school. In some sites, the projects increased interaction among teachers and between teachers and administrators. During project meetings, teachers shared ideas about such things as management strategies and discussed school-wide changes needed to help increase student engaged time. Participation also increased people's knowledge of other classrooms, particularly in the basic skills schools. Teachers reported that they liked doing the classroom observations because of the rare opportunity to go into other teachers' rooms during school hours and observe their teaching strategies. In addition to liking the opportunity to learn more about academic departments other than their own, some participants in the career education projects particularly valued the opportunity to have input into programs which were being developed for their schools.

Compatibility Between Project and Other Goals

Teachers' attitudes toward participation in the projects were influenced by perceived relationships between project and school or classroom goals. This reinforced participation in the basic skills projects but threatened participation in the career education projects. Increasing student achievement in the basic skills was fundamental to the basic skills schools. Participation in the career education innovation was sometimes jeopardized because some viewed it as relatively unimportant and potentially interfering with accomplishment of subject matter goals. This was more a threat which might affect future attempts at widespread implementation than an actual problem, but it did affect the projects. The administrators at one school would have provided more support for the project if it had involved something they considered more central to the curriculum. Many of the classes selected by teachers for the field trials of activities seemed to have been selected to minimize the conflict between career education and regular subject area coverage. Some were supplemental or enrichment classes without rigidly prescribed curricula. One was a new course without a curriculum. One participant observed that teachers would object least to implementing career education with low-achieving students who were not expected to master subject content anyway. Whenever a potential conflict arose between career education and departmental concerns, it was clear that at least some participants would give priority to their departments. Another deterrent was that some of the career education goals were quite broad and some

thought those goals were already being addressed through regular subject matter. Such teachers saw no reason to implement the broader career education goals.

Costs of Participation

The costs of participating were often high, particularly during periods of intensified project activities. Such intensifications occurred at least once in each site, primarily when field agents attempted to accelerate a project's progress or during classroom observations in the basic skills projects. During those periods, participants were required to spend considerable time in project meetings or other activities and, thus, away from classrooms. Many teachers seemed to feel that they were neglecting their classroom duties. Some were not confident that substitute teachers provided adequate instruction. Various tensions were magnified during periods of intense activities. Substitutes sometimes arrived late at Patriot and Middleville, causing teachers to arrive at meetings late and perhaps harried. Sometimes Middleville teachers did not have sufficient advance notice of meetings or observations to prepare instructions for substitute teachers. Non-participants at Green Hills were asked to relinquish planning periods to proctor for teachers attending meetings; when proctoring assignments increased, non-participants became resentful. At Middleville, some non-participants resented the frequency with which participants were released from classroom duties and made remarks such as, "Oh, you're here today" and "Oh, you're going to another meeting."

Perceived Future of the Innovation

Teachers' willingness to commit themselves to an innovation, to invest considerable time and effort in it, was influenced by their perceptions of the likely continuance or expansion of the innovation. Teachers in one school had been involved in several innovations which they felt had not been supported sufficiently beyond a certain point. For example, one innovation had been largely discontinued after the external field agent who introduced it lost his source of funding and withdrew; administrators did not schedule meetings which would have been necessary if teachers were to continue the innovation on their own. One component of that innovation involved scheduling silent reading throughout the school for 15-20 minutes each day. That was not seriously pursued after the field agent left, and classrooms in which it was attempted were frequently disrupted by such things as announcements over the intercom. Teachers had also been involved in several curriculum-writing projects but had not even seen the finished curricula after they had been submitted to administrators for approval. As one teacher summed it up, "We seem to be great at starting things and weak at following through." Teachers in that school were skeptical that support would be provided for such things as meetings and classroom observations after the RBS field agent left the site; suspecting that the project would be discontinued within the next year or so, they were hesitant to become committed to it. Some participants in the career education schools

thought that their efforts would later contribute to their academic departments because other teachers would use activities planned by participants. One teacher said, "I felt that I would be a resource for the rest of the department." However, when participants learned that administrators did not plan to mandate the project or even to strongly encourage wide-scale participation, their estimations of the value of their efforts were deflated.

Commitment to Specific Persons

Some participants were committed to people more than to innovations and continued to participate despite various hardships because of their commitment to those persons. For example, the commitment of Smalltown teachers to the principal prevented their withdrawal when project and other demands on their time made participation very difficult. Participants in some sites developed commitment to field agents and seemed to feel some obligation to continue participating.

Participant Roles

The complexity of teacher participation was especially apparent in the diversity of roles assumed by participants. The differences were within as well as across innovations. During the course of this research, participants engaged in a wide variety of activities; their behavior and the expectations which they and others held toward that behavior varied also. These variations are evident in the labels used for the roles which

will be described here: student, board member, researcher, instructional innovator, and trainer.

Participants reacted differently to the different roles; and, their attitudes toward the innovations corresponded closely to their reactions to the roles. Some roles were quite rewarding, thus increasing participant motivation. Other roles were demanding without clearly having an impact on classrooms; such roles tended to threaten continued participation.

Student

The "student" role involved participating in activities similar to those found in classrooms. Participants listened to lecture-like presentations, although they were often brief and interspersed with question-and-answer episodes and other activities. Participants also did practice exercises; they practiced using various innovation procedures such as conducting observations and completing forms. Instructional media and materials such as videotape recordings and drawings of classrooms, overhead projections, and simulated data were used. Performance on the exercises was compared with acceptable ranges of performance which had been established by RBS employees. Mastery tests were given at selected points in the training process to assess whether participants were able to follow the procedures.

In addition to participating in student-like activities, teachers exhibited other behaviors which are often associated with student roles.

Participants' attitudes toward the comparisons of their performance with expected performance resembled common attitudes toward tests. Some tests were treated like routine, practice tests which could be dismissed easily; others, such as the mastery tests, were considered much more important. A few participants became visibly upset at the prospect of taking mastery tests. The student role was so instilled into one participant that when talking to a researcher about non-teachers (external assistance agency employees, visitors, and others) who were present at one meeting, the participant referred to them as "adults."

The need to cast participants in a student role was related to the nature of the innovation. The complexity and quantity of the technical procedures included in the basic skills innovation were such that considerable time was required to communicate an understanding of them. The expectation that teachers would conduct observations, compile data, and compare them to research data required that they understand the technical procedures.

Participants were less satisfied with the innovation when the student role was predominant than when other roles predominated. Teachers objected to the time and effort required; some threatened to withdraw. One reason was that the training was very time-consuming; many of the participation costs discussed earlier were incurred during training. Second, some participants had difficulty comprehending portions of the technical procedures. Third, some teachers questioned the necessity of

learning the observation procedures or collecting data. For them, it was enough to be made aware of classroom behaviors; they did not feel that they had to be able to measure such behaviors precisely. In fact, many started making classroom changes long before observation data had been collected and analyzed. One teacher reported becoming aware of instructional time lost due to poor management or during transition from one activity to another while viewing the videotapes used in training; that teacher did not consider it necessary to go through elaborate training or data collection and analysis procedures to learn about the types of classroom changes needed.

Board Member

The "board member" role involved following an agenda of items which referred to decisions that would be made, listening to presentations of information about the decision area, discussing it, and making a decision. Participants' decisions were generally structured for them by others (administrative staff and field agents), similar to the way in which school board members' decisions are structured by superintendents and their staffs. Meeting agenda were established by principals and field agents. During project meetings, field agents presented background information and decision alternatives; they discussed the advantages and disadvantages of the alternatives. Participants then contributed additional information from their own experiences. They then discussed the alternatives and made decisions. This procedure was followed, with some

variation, when decisions about career education goals, objectives, and instructional strategies were made. Participants also made decisions about schedules for project activities, project priorities, and similar matters after those items were placed on the agenda and discussed. Participants also reacted to and revised project documents which had been drafted by field agents--survey instruments and project descriptions, for example.

The "board member" role allowed field agents to transfer knowledge to teachers without seriously threatening their status as full and equal participants. When information was presented, teachers understood that it would be needed in the near future for decision-making. It was usually not difficult to comprehend; moreover, teachers were expected to add it to their background knowledge but not apply it precisely. This role also allowed field agents and administrators to exert considerable influence over projects without arousing resistance. The influence was subtle; it reduced the demands on participants; and, participants maintained final decision-making authority.

Participants generally reacted favorably to the "board member" role. It required much less time and effort than if they had been required to identify decision areas and obtain information themselves. However, some participants objected to the amount of time which was devoted to particular decisions. For example, some considered discussions of goals and objectives as too theoretical and removed from the classroom; furthermore, those discussions were considered too time-consuming.

Researcher

The "researcher" role included several different kinds of data collection and analysis activities. Participants observed one another's classrooms using procedures suggested by RBS basic skills employees. Each participant conducted several fifteen-or thirty-minute observations, recording the number of students whose behavior fell within each of several "unengaged" categories (e.g., socializing) at pre-specified intervals. Second, participants compiled data; for example, they aggregated data across observations and followed a several-step process to calculate engaged time. Third, participants transferred information from one format to another. For example, they transferred information from reports of achievement test results and curriculum or textbook outlines to forms developed by RBS; they also transferred information from one RBS form to another. Fourth, participants compared data from their own classrooms to research data; in doing this, they used graphs prepared by RBS basic skills employees. Fifth, participants made estimates regarding classroom changes which would be expected to cause classroom data to compare more favorably with research data. This task included using nomographs of the relationship among allocated time, engagement rate, and engaged time; examining achievement test booklets to find out how particular concepts were tested; and using graphs to estimate the amount of overlap needed between instruction and tests in order to improve test scores.

The researcher role was dictated by the nature of the basic skills innovation. Participants had to perform numerous research tasks in order to collect, compile, and compare classroom data to research data.

Participants' reactions to the different activities of the researcher role varied. They liked conducting observations. Many participants commented that it was rare to have an opportunity to go into other teachers' classrooms while school was in session and observe the teaching techniques used. Specialist teachers liked seeing the classrooms from which their students came. However, the observations required a lot of time; teachers either had to relinquish planning periods or prepare lessons for substitutes. Participants appreciated the opportunity to carefully scrutinize achievement tests; this, too, was unusual to many. Participants reacted less favorably to other activities of the researcher role. Compiling and analyzing data was sometimes difficult and time-consuming; furthermore, teachers did some of this work on their own time. Transferring information from one format to another was sometimes tedious. Like many research tasks, this one sometimes required professional judgments but more often was clerical. Much of it could have been performed by clerks who had been given some decision rules; however, such clerical assistance was not available to participants.

Instructional Innovator

The "instructional innovator" role involved planning individual classroom changes and implementing them. Participants decided which basic skills strategies to use, whether and how to re-order instructional priorities, or which career education activities to use. Sometimes participants selected strategies or activities from resource materials or from suggestions made by colleagues during brainstorming sessions;

sometimes participants developed or modified strategies or activities. When they re-ordered instructional priorities, participants wrote schedules for teaching basic skills topics for the remainder of the school year. Participants then made preparations for implementation and carried it out.

The instructional innovator role allowed participants to behave more autonomously than some of the other roles. Teachers individually decided what changes they would make in their classrooms and then individually implemented the changes. Field agents provided implementation ideas and asked teachers for information about the changes they planned to implement and, later, about the actual implementation, but participants made their own decisions and carried them out independently.

Participants reacted quite favorably to the instructional innovator role. Teachers considered project activities more practical than during earlier stages and became aware of the benefits to be derived from participation. One teacher remarked that participants became more interested in the projects "when they started putting things in their lesson plans and knew what they were doing." People seemed to enjoy discussing their experiences with one another. In one school, two teachers who had been somewhat reticent and insecure during the technical training became key resources to the group; the two seemed to be highly regarded for their experiences with a variety of strategies. Writing curriculum plans was sometimes tedious but might be quite useful later; and, planning time was made available through the projects. Some participants reported that the instructional strategies used to increase student engaged time seemed to make

instruction more efficient and classrooms more organized and manageable. Many of the career education activities were appealing to students and seemed to add an element of excitement to subject matter that sometimes became routine to teachers and students alike.

Trainer

The "trainer" role occurred in only one site, Middleville, but was very important to the teachers involved. Three teachers were members of a pre-planning team which attended pre-session meetings with the field agents and the principal; the three then helped present materials to other participants. The entire group of participating teachers at Middleville helped disseminate the project to other teachers. After participating teachers went through the entire innovation process for student engaged time, including implementation, they presented the project to other teachers and helped train them. An intermediate service agency field agent organized the dissemination sessions, preparing packets of materials for participants to use; participating teachers presented the materials.

Most participants reacted very favorably to the trainer role. They felt that it enabled them to act as professionals. They seemed to feel that they were ordinarily given too few extra-classroom opportunities to assume the role of professional. They liked the fact that teachers were helping one another; too frequently, they felt, administrators tended to perceive teachers as incapable of this and brought in outside "experts" whose presentations were less likely to be useful in Middleville. However, one teacher seemed to be intimidated by the role.

Summary

Some of the complexities of teacher participation in educational innovation were discussed here. In particular, the selection and initial motivation, continued motivation, and roles of participants were described. There were three major findings:

- Voluntary participation and initial motivation were not nearly as important as factors which emerged later to either encourage or discourage continued participation.
- The roles and activities of participants varied considerably; their attitudes toward the innovations varied accordingly and influenced their motivation to continue participating.
- The representativeness of the participant group was more important to successful dissemination than voluntary participation.

Several factors seemed to be responsible for the lack of importance of voluntary participation--selective inclusion of teachers who were considered likely to be receptive to an innovation and motivated to work on it, rapid develpoment of commitment to a project, and the acceptance of appointment as appropriate. Many teachers had few motivations for participating initially and had only a vague understanding of what it would entail. However, many incentives and deterrents to participation emerged over time. Particularly important were anticipated educational benefits, the opportunity for increased interaction among teachers and with administrators, compatibility between project and classroom goals, the costs of participation, and the perceived likelihood that innovations would be continued or expanded.

Five roles of participants were described here--student, board member, researcher, instructional innovator, and trainer. Some roles and activities were perceived as providing knowledge or ideas which would be useful to classroom practice or as reaffirming teachers' status as professionals; such roles tended to increase motivation to participate. Other roles and activities were quite demanding without being apparently useful in the classroom; they tended to reduce motivation to participate.

The composition of participant groups was quite important to the acceptance of an innovation by nonparticipating teachers, although the criteria used to judge participant groups varied somewhat among schools. The inclusion of representatives of major organizational units or informal factions and of people who were perceived as competent and unlikely to waste time on an innovation that was not worthwhile was important, as was the exclusion of teachers whose credibility was low.

Implications

The research reported here has implications for innovation practice and for research on participation. Both sets of implications were derived from the recognition here of some of the complexities of participation.

Implications for Practice

The findings reported here indicate that the current emphasis on limiting participation to teachers who are already motivated toward an innovation is not warranted. However, that does not mean that motivations to participate is unimportant. Rather, events in the projects studied here indicate that it is important to select participants who

are capable of becoming motivated and to attempt to develop motivation rather early in the life of a project. And, it is important to be alert to factors which may affect motivation to continue participating. In the schools studied here, incentives and deterrents to continued participation were much more important than initial motivation. The factors which influenced continued motivation included commitment to the innovation, increased interaction among teachers and administrators, compatibility between project and other goals, the costs of participating, the likelihood that the innovation would be continued or expanded, and commitment to specific persons.

In addition to the above factors, the nature of participation itself--the activities in which participants are engaged and the roles in which they are cast--appears to be an important factor in the successful involvement of teachers in planned educational change. Participation can take many forms. It can involve many different kinds of activities and assign participants to quite varied roles. The time and effort demanded of participants, the expectations others hold of participant contributions, and the apparent relevance of participation to classroom practice can also vary considerably. The form which participation takes may have a very important influence on continued motivation to participate.

When acceptance of an innovation by non-participating teachers is important (for example, if the innovation will eventually be expanded to other teachers), the participant group should be selected carefully.

Representatives of important formal and informal groups should be included; the credibility of participants to other teachers should also be considered. The findings reported here suggest that the inclusion of representatives of important groups should be given higher priority than voluntary participation.

Implications for Research

The analysis of data from this study indicates that research into the effects of participation should take into consideration the complexities of participation. In particular, the research should attend to the roles and activities of participants and to the kinds of participation effects which are under examination.

Participant roles and activities. Research will continue to produce mixed results unless the form participation takes is treated as a major factor in the research. Different forms of participation can be expected to produce different results. Several questions about the form of participation should be asked: What do participants actually do? What are the demands of participation? What kinds of expectations do others (e.g., administrators, consultants, others who are involved) hold regarding the contributions of participants toward the innovation process? How do those factors vary over time?

Participation effects. Research on the effects of participation might focus on several kinds of effects, particularly participant satisfaction with and commitment to an innovation or actual implementation of the innovation. The referrent of satisfaction and commitment might

be the activities surrounding an innovation rather than classroom implementation of it. For example, in the projects studied here, there were many pre-implementation activities such as project meetings which primarily involved planning for implementation. The research necessarily focused primarily on those activities; implementation was just beginning and participants' knowledge of the actual innovations as they would be implemented was limited. Participants may react differently to an innovation than to related project activities. While the different kinds of effects of participation are likely to be closely related to one another, they will not always correspond perfectly. If research findings are to be used to inform practice, researchers must attempt to describe research variables clearly.

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